

IN THE CLAIMS:

Please amend claims 1, 3, and 5-12 as follows:

1. (Currently Amended) An emulation processing method for a storage device that accesses a storage medium defined by a first sector length unit by a command from a host defined by a second sector length unit that is shorter than the first sector length, said method comprising:

a step of reading data of an address that is specified with a second sector length unit from said storage medium defined by a first sector length unit;

a step of rewriting said read data defined by said first sector length unit into data defined by said second sector length unit;

a step of saving said data that is read or rewritten in the first sector length unit into a memory;

a step of writing said rewritten data to the storage medium; and

a step of registering said saved and memorized data as alternate data when said writing has failed.

2. (Original) The emulation processing method for a storage device of claim 1, wherein said saving step comprises a step of saving the data with the first sector length unit to the storage medium.

3. (Currently Amended) An emulation processing method for a storage device that accesses a storage medium defined by a first sector length unit by a command from a host defined by a second sector length unit that is shorter than the first sector length, said method comprising:

a step of reading data of an address that is specified with a second sector length unit from said storage medium defined by a first sector length unit;

a step of rewriting said read data defined by said first sector length unit into data defined by said second sector length unit;

a step of saving said data that is read or rewritten in the first sector length unit;

a step of writing said rewritten data to the storage medium;

a step of registering said saved data as alternate data when said writing has failed;

a step of determining whether or not the corresponding all data with said first sector length unit is rewritten from a target address with said second sector length unit of a write request;

a step of executing said savesaving step when all of the data are not rewritten; and

a step of registering to the storage medium as alternate data, said data with said second sector length unit of a write request when said writing has failed, when all of the data is rewritten.

4. (Original) The emulation processing method for a storage device of claim 1, wherein said reading step comprises a step of staging said data with the first sector length unit to a cache area of a buffer memory from the storage medium.

5. (Currently Amended) The emulation processing method for a storage device of claim 1, wherein said registering step comprises a step of setting a valid flag to said ~~savesaved~~ data.

6. (Currently Amended) The emulation processing method for a storage device of claim 1, further comprising;  
a step of judging whether or not said saving step is ~~suecessssuccessful~~; and  
a step of performing said rewriting step when said saving step is ~~suecessssuccessful~~.

7. (Currently Amended) The emulation processing method for a storage device of claim 1, wherein said reading step comprises a step of staging said data with the first sector length unit to a cache area of a buffer memory from the storage medium when ~~receive-receiving~~ a write command.

8. (Currently Amended) An emulation processing method for a storage device that accesses a storage medium defined by a first sector length unit by a

command from a host defined by a second sector length unit that is shorter than the first sector length, said method comprising;

a step of reading data of an address that is specified with a second sector length unit from said storage medium defined by a first sector length unit;

a step of rewriting said read data defined by said first sector length unit into data defined by said second sector length unit;

a step of saving said data that is read or rewritten in the first sector length unit;

a step of writing said rewritten data to the storage medium;

a step of registering said saved data as alternate data when said writing has failed;

a step of searching a save area when ~~receive-receiving~~ a write command from a host; and

a step of notifying that said saving step is not performed when said save area is not found by said searching step.

9. (Currently Amended) A storage device that accesses a storage medium defined by a first sector length unit by a command from a host defined by a second sector length unit that is shorter than the first sector length, comprising:

a buffer memory; and

a control circuit for reading data of the address specified with a second sector length unit from said storage medium to said buffer memory with a first sector

length unit, and then rewriting said read data with the first sector length unit to data with the second sector length unit and writing said rewritten data to said storage medium,

wherein said control circuit saves said data that is read or rewritten with the first sector length unit into a storage area, and registers said saved and stored data as alternate data when said writing has failed.

10. (Currently Amended) The storage device of claim 9, wherein said control circuit savesaves the data with the first sector length unit to the storage medium.

11. (Currently Amended) A storage device that accesses a storage medium defined by a first sector length unit by a command from a host defined by a second sector length unit that is shorter than the first sector length, comprising:

a buffer memory; and

a control circuit for reading data of the address specified with a second sector length unit from said storage medium to said buffer memory with a first sector length unit, and then rewriting said read data with the first sector length unit to data with the second sector length unit and writing said rewritten data to said storage medium,

wherein said control circuit saves said data that is read or rewritten with the first sector length unit to a storage area, and registers said saved data as alternate data when said writing failshasfailed, and

wherein said control circuit further ~~determine-determines~~ whether or not the corresponding all data with said first sector length unit is rewritten from a target address with said second sector length unit of write request, execute said save step when all of the data are not rewritten, and register to the storage medium as alternate data, said data with said second sector length unit of a write request when said writing has failed, when all of the data is rewritten.

12. (Currently Amended) The storage device of claim 9, wherein said control circuit ~~stage-stages~~ said data with the first sector length unit to a cache area of said buffer memory from the storage medium.

13. (Currently Amended) The storage device of claim 9, wherein said control circuit ~~set-sets~~ a valid flag to said ~~save-saved~~ data for said registering.

14. (Currently Amended) The storage device of claim 9, wherein said control circuit ~~judge-judges~~ whether or not said saving is ~~success-successful~~, and ~~perform-performs~~ said rewriting when said saving is ~~success-successful~~.

15. (Currently Amended) The storage device of claim 9, wherein said control circuit ~~stage-stages~~ said data with the first sector length unit to a cache area of said buffer memory from the storage medium when ~~receive-receiving~~ a write command.

16. (Currently Amended) A storage device that accesses a storage medium defined by a first sector length unit by a command from a host defined by a second sector length unit that is shorter than the first sector length, comprising:

a buffer memory; and

a control circuit for reading data of the address specified with a second sector length unit from said storage medium to said buffer memory with a first sector length unit, and then rewriting said read data with the first sector length unit to data with the second sector length unit and writing said rewritten data to said storage medium,

wherein said control circuit saves said data that is read or rewritten with the first sector length unit to a storage area, and registers said saved data as alternate data when said writing failshas failed,

wherein said control circuit searchsearches a save area when receive  
receiving a write command from a host, and notifynotifies that said saving is not performed when said save area is not found by said searching.

17. (Currently Amended) The storage device of claim 9, further comprising a head for reading and writing to said storage medium.

18. (Currently Amended) The storage device of claim 9, wherein said control circuit receivereceives a write command from said host of UNIX OS.